REMARKS

Applicant appreciates the thorough examination of the present application that is reflected in the Office Action of August 16, 2004. Applicant respectfully submits that all of the pending claims are patentable for the reasons that now will be described.

Claim Amendments Unrelated to the Objections or Rejections

Claims 1, 5, 6, and 7 have been amended to eliminate recitations of "step" in the method claims. Claims 17, 21, 22, and 23 have been amended to eliminate "means for" language in the computer program product claims.

Objections of Claims 15 and 23 Have Been Overcome

Claims 15 and 23 have been amended to substitute "selecting" for "electing". Accordingly, Applicant submits that the objections to these claims has been overcome.

Rejections of Claims 7, 8, 15, 16, and 24 Under 35 USC §112 Have Been Overcome

Claims 7, 15, and 23 have been amended to recite "having the one or more affinities" to provide the clarification suggested by the Examiner on Page 2 of the Office Action. These claims have also been amended to replace the term "otherwise" with "when the client application sending the received connection request is not identified in the stored information as having an existing connection to the particular one of the server applications and wherein one of the selective activation messages has not been received from the particular one of the server applications."

Accordingly, Applicant submits that the rejections under 35 USC §112, second paragraph, have been overcome. Thus, Applicant submits that these claims and the claims that depend therefrom are in compliance with 35 USC §112.

Applicants File Herewith a Terminal Disclaimer to Overcome the Provisional Obviousness-Type Double Patenting Rejection of Claims 1-24:

Claims 1-24 have been provisionally rejected under a nonstatutory judicially created doctrine of obviousness-type double patenting over copending U.S. Application Serial No. 09/825,071. Applicant submits herewith a Terminal Disclaimer disclaiming additional term over the copending U.S. Application Serial No. 09/825,071. Applicant's agreement to

provide a Terminal Disclaimer is to expedite issuance of the present case and does not admit

that the present invention is obvious in light of the copending U.S. Application Serial No.

09/825,071. Withdrawal of the obviousness-type double patenting rejection is respectfully

requested.

Independent Claims 1, 9, 17 Are Patentable Over Modi et al.

Independent Claim 1 stands rejected under 35 USC §102(e) over U.S. Patent No.

6,587,866 to Modi et al. ("Modi"). Amended Claim 1 recites:

> 1. A method of automatically providing server affinities for related
> concurrent connection requests in networking environments which perform workload
> balancing, comprising:
> selectively activating an affinity for a particular server application based on an
> activation message from the particular server application;
> routing a first connection request to the particular server application from a
> selected source; and
> bypassing normal workload balancing operations, responsive to the selective
> activation, for subsequent concurrent connection requests for the particular server
> application from the selected source while at least one such concurrent connection
> request remains active.

Accordingly, an affinity or a particular server application is selectively activated

based on an activation message from the server application. Normal workload balancing

operations are then bypassed for those messages in response to the selective activation of the

affinity. As explained in the specification, one embodiment of the present invention "enables

an instance of a particular server application to determine dynamically, at run time, whether a

relationship with a particular source (e.g., a particular client or subnet) is expected to

comprise multiple successive connection requests, and then to specify that those successive

requests should be directed to this same server application instance." (Specification, Page 12,

lines 4-8, emphasis added.)

In contrast, Modi describes a static approach to workload balancing in which a "non-

affinity policy" or an "affinity policy" is always applied for a particular client. (See Modi,

Col. 7, line 66 - Col. 8, line 15, Col. 9, line 16 - Col. 11, line 7). Modi does not describe that

a portion of the system can change a "non-affinity policy" for a particular source into an

"affinity policy" for that source. Moreover, Modi provides no description whatsoever that a

server application can use an activation message to selectively activate an affinity for the

server application, or that normal workload balancing operations are bypassed responsive to the selective activation, as is recited in Claim 1.

For at least these reasons, Claim 1 is respectfully submitted to be patentable over Modi.

Independent Claims 9 and 17 include analogous recitations to Claim 1, and are submitted to patentable over Modi for at least the reasons explained for Claim 1.

Dependent claims 2-6, 10-14, 18-22 are patentable at least per the patentability of the independent claims from which they depend. Moreover, these dependent claims are respectfully submitted to provide additional bases for patentability over the cited references, as will now be explained.

Claims 5, 13, and 21 further define that an affinity is selectively activated based on detecting an automatic affinity activation parameter in a configuration statement for the particular server application. Not only does Modi not teach selectively activating an affinity, as explained above, it provides no description whatsoever that an affinity can be selectively activated based on detecting an automatic affinity activation parameter in a configuration statement for the particular server application. For at least these reasons, Claims 5, 13, and 21 are respectfully submitted to be patentable over Modi.

Independent Claims 7, 15, and 23 are Patentable over Modi in View of Abramson et al.

Claims 7-8, 15-16, and 23-24 stand rejected under 35 USC §103(a) as unpatentable over Modi in view of U.S. Patent No.6,539,434 to Abramson et al. ("Abramson").

Amended Claim 7 recites (emphasis added):

> 7. A method of automatically routing related concurrent connection requests in a networking environment which performs workload balancing, comprising:
> storing information for one or more automatic affinities, <u>responsive to receiving a selective activation message from one or more server applications having the one or more affinities</u>;
> ...
> routing each received connection request to a particular one of the server applications, further comprising:
> selecting the particular one of the server applications using the stored information for automatic affinities, when the client application sending the received connection request is identified in the stored information as having an existing

connection to the particular one of the server applications and wherein <u>one of the selective activation messages has been received from the particular one of the server applications</u>; and

selecting the particular one of the server applications using workload balancing when the client application sending the received connection request is not identified in the stored information as having an existing connection to the particular one of the server applications and wherein one of the selective activation messages has not been received from the particular one of the server applications.

Accordingly, information on an affinity is stored responsive to a selective activation message from a server application. A particular server application is selected using the stored affinity information when the client application that sends a connection request is identified as having an existing connection to the particular server application and a selective activation message has been received from the particular server application.

The Office Action concedes on Page 6 that "Modi does not specifically disclose storing information for the automatic affinities responsive to receiving a selective activation message ... ." Moreover, Applicant submits that Modi does not disclose selecting a particular server application using stored affinity information when the client application that sends a connection request is identified as having an existing connection to the particular server application and a selective activation message has been received from the particular server application, as recited in Claim 7.

The Office Action cites Abramson in an attempt to supply part of the missing teaching of Modi. The Office Action states on Page 6 that "Abramson teaches storing information for the automatic affinities (sessions) responsive to receiving a selective activation message from ... one or more server applications (col. 3, lines 41-65, ..). However, Applicant submits that the Office Action has misinterpreted the disclosure of Abramson, which is repeated below:

> When an HTTP server 22 receives a request without a <u>session</u> ID 110 (discussed in detail below), which indicates the start of a new <u>session</u>, the corresponding connection module 30 uses the information from table 100 to select an application module 24 to use for the new <u>session</u>. The application module 24 assigns a new <u>session</u> ID to the new <u>session</u>. <u>The assignment of the application server 24 is made through a weighted random selection according to load (reflected by the probabilities in table 100), so that lightly-loaded application servers 24 are more likely to get new sessions. Once assigned, the session ID 110 (and corresponding particular application server 24) is used throughout the duration of the session.</u>

> The <u>session</u> ID 110 is attached to all subsequent page requests either through the request URL or through a standard HTTP cookie. As shown in FIG. 3, the <u>session</u> ID 110 encodes the IP address of the application server 24 that hosts the <u>session</u>, an

identifier that uniquely identifies the <u>session</u> within that application server, and the IP address of the backup server 26 assigned to that application server. Preferably, this information is encoded as a single stream of characters containing the information. Subsequent requests are then routed directly back to the assigned application server 24 without involving any of the other application servers.
(Abramson, Col. 3, lines 41-65, emphasis added.)

The cited portion of Abramson teaches that when a new session request is received without a session ID, a connection module selects an application module to use for the new session. Abramson teaches that the "assignment of the application server 24 is made through a <u>weighted random selection according to load</u> (reflected by the probabilities in table 100), <u>so that lightly-loaded application servers 24 are more likely to get new sessions</u>." (Abramson, Col. 3, lines 47-50.) Accordingly, Abramson only teaches that load balancing is used to distribute new session requests to lightly-loaded applications servers. Abramson provides no disclosure whatsoever that information on an affinity for a server application is stored responsive to a selective activation message from a server application. Moreover, Abramson does not disclose that a particular server application is selected using the stored affinity information when the client application that sends a connection request is identified as having an existing connection to the particular server application and a selective activation message has been received from the particular server application, as recited in Claim 7.

Moreover, Applicant notes that the Office Action has not provided *clear and particular* evidence from Modi and Abramson themselves as to why one who is skilled in the art, with no knowledge of the claimed invention, would modify Modi to include the teachings of Abramson so as to obtain the recitations of Claim 7. Instead, it appears that the Office Action is relying on impermissible hindsight in view of the present application. Moreover, as explained above, even if those references are combined, they still would not teach each of the recitations of Claim 7.

For at least these reasons, Claim 7 is respectfully submitted to be patentable over Modi in view of Abramson.

Independent Claims 15 and 23 include analogous recitations to Claim 7, and are submitted to patentable over Modi for at least the reasons explained for Claim 7.

Dependent claims 8, 16, and 24 are patentable at least per the patentability of the independent claims from which they depend.

CONCLUSION

In light of the above amendments and remarks, Applicant respectfully submits that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested.

Respectfully submitted,

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